AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for metal electroplating, comprising:

a electroplating tank for containing an electrolyte at a first temperature;

a substrate holder for holding a semiconductor substrate; and

a heater for heating the portion of the electrolyte adjacent to the substrate holder to a second temperature higher than the first temperature[[.]],

wherein the heater is independently disposed in the electroplating tank and in a position opposite to the substrate holder, and the heater provides no fluid into the electroplating tank.

2-3. (Cancelled)

4. (Original) The apparatus as claimed in claim 1, wherein a temperature difference of about 5 to 60 °C exists between the second temperature and the first temperature.

5. (Original) The apparatus as claimed in claim 1, wherein the second temperature is about 27 to 80 °C.

6. (Original) The apparatus as claimed in claim 1, wherein the electrolyte comprises Cu ions.

7-8. (Cancelled)

9. (Withdrawn) A method of metal electroplating, comprising the steps of:

placing a semiconductor substrate into an electroplating tank filled with an electrolayte; and

heating the portion of the electrolyte adjacent to the semiconductor substrate via an independent heater during electroplating of the semiconductor substrate.

10. (Withdrawn) The method as claimed in claim 9, wherein the heater is independent to the electroplating tank and disposed in a position opposing the semiconductor substrate.

11. (Withdrawn) The method as claimed in claim 9, wherein the semiconductor substrate is held by a substrate holder and the heater is embedded therein.

12. (Withdrawn) The method as claimed in claim 9, wherein the heater comprises an electrothermal coil.

13. (Withdrawn) The method as claimed in claim 9, wherein the heater comprises a heat-exchange pipe containing thermal oil.

14. (Withdrawn) The method as claimed in claim 9, wherein the electrolyte comprises copper (Cu) ions.

15. (Withdrawn) A method of metal electroplating, comprising the steps of:

providing an electroplating tank containing an electrolyte at a first temperature, wherein the electrolyte comprises metal ions;

immersing a semiconductor substrate held by a substrate holder into the electrolyte;

heating the portion of the electrolyte adjacent to the semiconductor substrate to a second temperature by a heater independent of the electroplating tank; and

electroplating the semiconductor substrate with the portion of the electrolyte at the second temperature to form a metal layer thereon.

16. (Withdrawn) The method as claimed in claim 15, wherein a seed layer of the same type of metal ion as that in the electrolyte is formed over the semiconductor substrate prior to immersion of the semiconductor substrate.

17. (Withdrawn) The method as claimed in claim 15, wherein the heater comprises an electrothermal coil.

18. (Withdrawn) The method as claimed in claim 15, wherein the heater comprises a heat exchange pipe containing thermal oil.

19. (Withdrawn) The method as claimed in claim 15, wherein the heater is disposed in a position opposing the semiconductor substrate in the electroplating tank.

20. (Withdrawn) The method as claimed in claim 15, wherein heater is embedded in the substrate holder.

21. (Withdrawn) The method as claimed in claim 15, wherein a temperature difference of 5 to 60 °C exists between the second temperature and the first temperature.

22. (Withdrawn) The method as claimed in claim 15, wherein the second temperature is about 27 to 80 °C.

23. (Withdrawn) The method as claimed in claim 15, wherein the electrolyte comprises copper (Cu) ions.